

NAME: _____

GEOM CH. 4.8 HOMEWORK

COMPUTER GENERATED NOV. 30, 2009

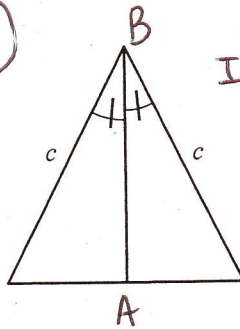
SHOW YOUR WORK, EXPLAIN

YOUR SCORE: _____

TOTAL: 10 points

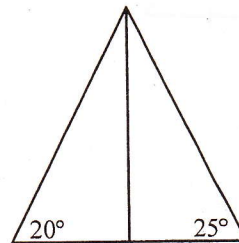
- (1p) 1. Which shows a median of a triangle?

[A]

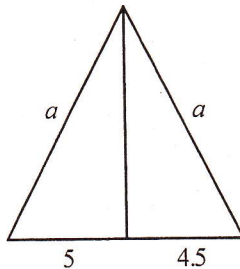


ISOSCELES
TRIANGLE
AB - BISECTOR
AND MEDIAN
CONJ. 28

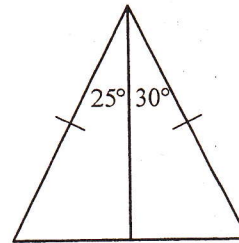
[B]



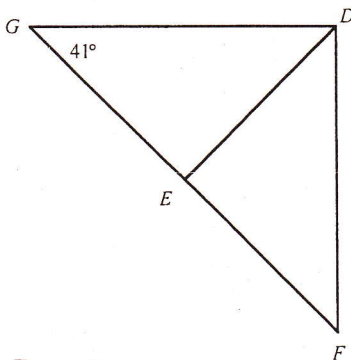
[C]



[D]



- (2p) 2. \overline{DE} is a median and altitude of $\triangle GDF$. What is the measure of angle DFE ?



BASED ON CONJECTURE C-28
IS AN ISOSCELES TRIANGLE
 $\angle G$ AND $\angle F$ BASE ANGLES
THEY ARE CONGRUENT
 $\angle DFE (\angle F) = 41^\circ$

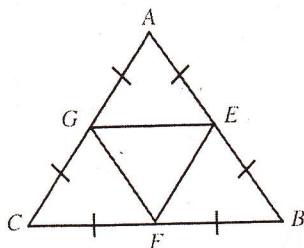
[A] 41 degrees

[B] 90 degrees

[C] 39 degrees

[D] 180 degrees

- (3p) 3. What can you conclude about $\triangle EGF$?



$$\triangle GAE \cong \triangle EFB \cong \triangle CGF$$

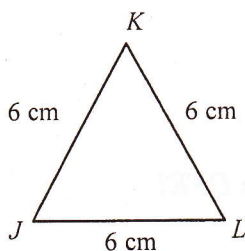
$$\text{BECAUSE } \overline{GA} \cong \overline{AE} \cong \overline{EB} \cong \overline{BF} \cong \overline{FC} \cong \overline{CG}$$

$$\overline{GE} \cong \overline{EF} \cong \overline{FG}$$

$\triangle GEF$ - EQUIANGULAR

$$\text{ALL ANGLES} = \frac{180^\circ}{3} = 60^\circ$$

- (1p) 4. Find $m\angle L$.



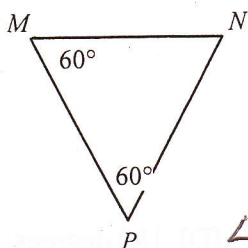
ALL SIDES ARE CONGRUENT

$$\overline{JK} \cong \overline{KL} \cong \overline{LJ} = 6 \text{ cm}$$

TRIANGLE JKL - EQUILATERAL AND EQUIANGULAR; ALL ANGLES ARE

$$\text{CONGRUENT } \frac{180^\circ}{3} = 60^\circ; \angle L = 60^\circ$$

- (3p) 5. Find MN if the perimeter of $\triangle MNP$ is 45 meters.



$$\angle M \cong \angle P; \angle N = 180^\circ - (60^\circ + 60^\circ) = 60^\circ$$

ALL ANGLES ARE CONGRUENT

$\triangle PMN$ - EQUIANGULAR AND EQUILATERAL (C-29)

$$\text{PERIMETER } \triangle MNP = MP + PN + NM = \frac{45}{3} = 15 \text{ m}$$

$$\underline{MN = 15 \text{ m}}$$